

CLAIMS

1. A semiconductor light emitting device comprising:

5 M pieces of light emitting units (M is an integer of 2 or more) in which a light emitting element array composed by arranging a plurality of semiconductor light emitting elements is mounted in a heat sink having a cooling water passage of which at least a part has conductivity;

10 power supply means for electrically and serially connecting the M pieces of light emitting element arrays contained in the M pieces of light emitting units, and which supplies the electric power for making the semiconductor light emitting element emit light;
15 and

cooling water supply means for connecting the cooling water passages of the M pieces of heat sinks contained in the M pieces of light emitting units in parallel by water conveyance pipes, and which supplies
20 cooling water which cools the semiconductor light emitting element,

wherein, in each of the M pieces of light emitting units, a conductive member connected electrically with the conductive portion of the cooling
25 water passage is provided separately in the upstream direction or the downstream direction of the water

conveyance pipe by a predetermined distance from the water inlet end or the water outlet end of the cooling water passage, and comes into contact with cooling water.

5 2. The semiconductor light emitting device according to Claim 1,

 wherein the conductive member is formed into a cylinder, and is interposed in the middle of the water conveyance pipe made of an insulating material, and

10 wherein the sectional area of the conductive portion of the cooling water passage at the water inlet end or the water outlet end of the heat sink is smaller than that of the conductive member formed into the cylinder.

15 3. The semiconductor light emitting device according to Claim 1 or 2, wherein the heat sink is made of a conductive material, and the conductive member is fitted to the water inlet end or the water outlet end of the heat sink, and

20 wherein the conductive member is formed substantially like a funnel so as to extend its diameter toward the upstream direction or the downstream direction of the water conveyance pipe.

25 4. The semiconductor light emitting device according to any one of Claims 1 to 3, wherein the semiconductor light emitting element is a semiconductor

laser element.

5 5. A plant cultivation apparatus comprising the
semiconductor light emitting device according to any
one of Claims 1 to 4, wherein the semiconductor light
emitting device irradiates plants with light to
cultivate the plants.